Microbiology and Immunology

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Administration:
Head of the Department: Susan R. Ross
Director of Graduate Studies: Alan McLachlan

Program Codes:
20FS1468MS (MS)
20FS1468PHD (PhD)

The Department of Microbiology and Immunology offers formal admission to the Doctor of Philosophy degree program and participates in the Medical Scientist Training Program (see the Medical Scientist Training Program (http://catalog.uic.edu/gcat/colleges-schools/medicine/mstp) section of the catalog for more information). The department carries out basic research in the areas of immunology, virology, and microbial molecular biology. Research leading to a graduate degree is available in the general areas of molecular, cellular, and tumor immunology; molecular biology and genetics of prokaryotes; and molecular biology of viruses.

Admission and Degree Requirements

- MS in Microbiology and Immunology (See listing for PhD in Microbiology and Immunology)
- PhD in Microbiology and Immunology (http://catalog.uic.edu/gcat/colleges-schools/medicine/mim/phd)

MIM 425. Fundamentals of Immunology and Microbiology. 3 hours.
Mechanisms of host defense; antigens, immunoglobulins and their reactions; antibody synthesis, regulation and the cellular immune response; bacterial and viral structure and function; mechanisms of pathogenesis. Course Information: Prerequisite(s): Consent of the instructor or registration in the College of Medicine.

MIM 455. Microbiology Laboratory Rotation. 3 hours.
Course in basic and applied methods essential for the study of nucleic acids, immunoglobulins, gene transfer, cell fusion, virological and immunological methods. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 6 hours. Students may register in more than one section per term. Prerequisite(s): Graduate standing.

MIM 551. Advanced Immunology. 2 hours.
Concepts in immunochemistry, immunogenetics, molecular immunology, cellular immunology and immunopathology at the intermediate level. Course Information: Prerequisite(s): GCLS 501, GCLS 502, GCLS 503 and GCLS 510 or consent of the instructor.

MIM 553. Molecular Biology of Viruses. 2 hours.
Animal viruses including basic structure and viral nucleic acids; emphasizes molecular organization of viral genomes; cellular and molecular events during virus replication and viral transformation. Course Information: Prerequisite(s): GCLS 501, GCLS 502, GCLS 503, and GCLS 511 or consent of the instructor.

MIM 554. Molecular Aspects of Microbiology. 3 hours.
Basic concepts of prokaryotic and eukaryotic genetics; gene structure and function; gene expression; molecular aspects of mutation and recombination; chromosome structure and function. Course Information: Prerequisite(s): BCHE 460.

MIM 560. Microbial Pathogenesis. 2 hours.
Genetics, molecular biology and physiology of pathogenic bacteria, and host-pathogen interactions. Course Information: Credit is not given for MIM 560 if the student has credit for MIM 552. Prerequisite(s): GCLS 501, GCLS 502, GCLS 503, and GCLS 511 or consent of the instructor.

MIM 585. Cell Biology. 4 hours.
Functional and structural organization of the cell with emphasis on the cellular basis of physiological activity. Course Information: Same as ANAT 585 and PHBY 585.

MIM 594. Special Topics in Microbiology, Immunology and Virology. 1-2 hours.
Advanced topics are covered in depth. Topics vary yearly. Course Information: Prerequisite(s): BCHE 460 and MIM 451 and MIM 455 and MIM 552 and MIM 553 and consent of the instructor.

MIM 595. Seminar in Microbiology and Immunology. 1 hour.
Topics of current research interest are presented by guest lecturers from outside institutions in areas of molecular biology, bacteriology, virology and immunology. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Presentation must be understandable to the broad Microbiology community in addition to the specialist.

MIM 598. Research in Molecular Biology and Immunology. 0-16 hours.
M.S. thesis research on problems in microbiology, immunology, virology and molecular biology. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): Graduate standing in microbiology and immunology.

MIM 599. Research in Molecular Biology and Immunology. 0-16 hours.
Ph.D. thesis research on problems in microbiology, immunology, virology and molecular biology. Course Information: Satisfactory/Unsatisfactory grading only. Prerequisite(s): Graduate standing in microbiology and immunology.